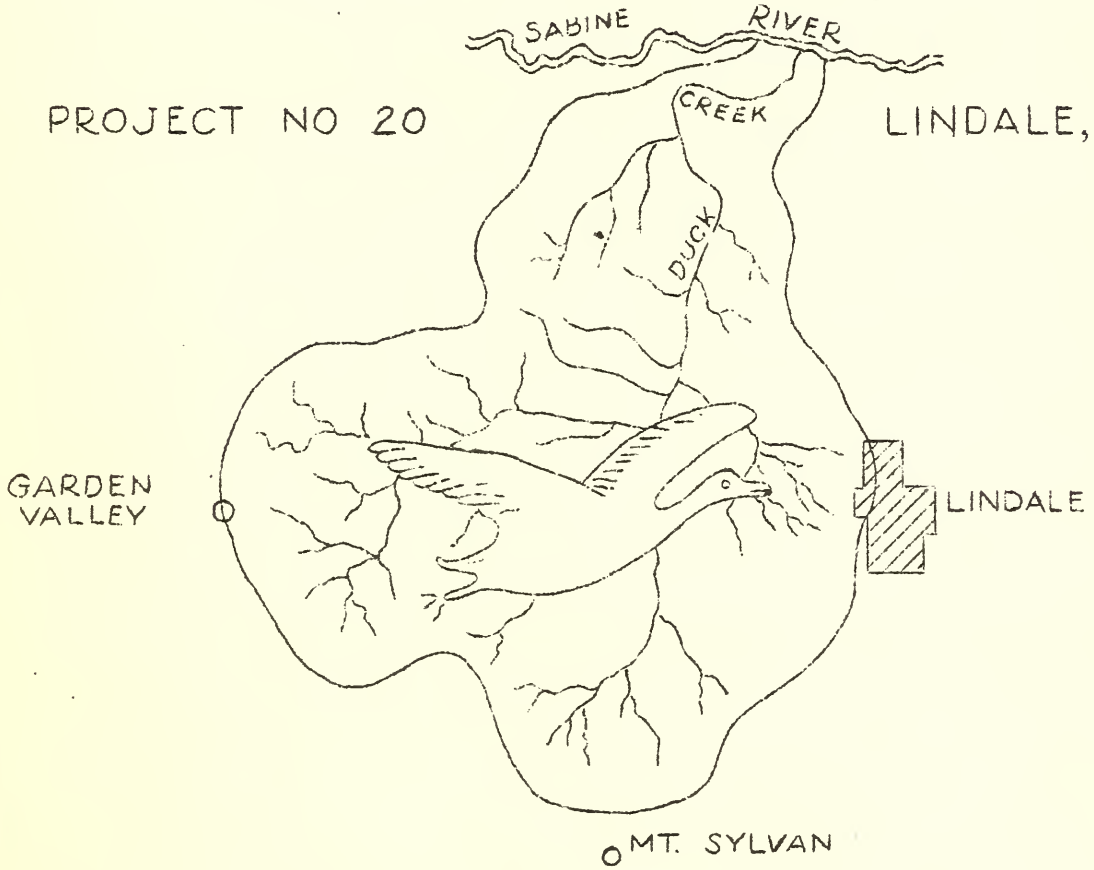
DUCK CREEK NEWS

UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

PROJECT NO 20 LINDALE, TEXAS



MISSIONARIES

Thirty-one Texas counties and four other states were represented by visitors to the Duck Creek demonstration during the past thirty days. Almost fourteen hundred people registered and had the various phases of erosion control work explained to them as they were conducted over the area. The largest group to visit the area on any one day came April 23, when three hundred eleven people from Shelby, Titus and Wood Counties were present.

It would be interesting to our cooperators if they could hear the comments made by the visitors. "I hated to lose a day out of my crop, but I'm sure glad I came." "I had no idea there was so much to be seen." "Strip cropping is what we need." "I saw several things that will fit my farm to a "T"." We could go on and on repeating things that have been said about your farms, but will mention just one more. Clarence DeBusk, of Cherokee County, who never quits working for the betterment of East Texas says, "I hope I live to see the time when every farm in East Texas has the systematic control of erosion that you have in the Duck Creek Area."

A missionary may be defined as one who teaches or carries a message. The good cooperator, teaching the message of soil conservation, is a missionary of high type, because his work will influence the welfare of mankind for generations to come.

FARM FORESTS

In this section very little thought has been given to the development or management of the farm woods. There are areas on almost every farm, however, where the land can be best protected and the steadiest long time income guaranteed if reforesting is done or forest management practiced.

Landowners will be interested in studying the farm forest management demonstration on the J. A. Johnson farm on Highway No. 37, north of Lindale. The area chosen is typical of second-growth pine forest land in northeast Texas, and takes in forty-three acres of cut over timber and twenty-two acres which are being removed from cultivation.

Fire lanes will be plowed to protect the area against fires. Where the forest borders the highway these lanes will consist of three furrows set ten feet back from the road, the interval between the road and the plowed area being burned over from time to time. Where the forest is bordered by land lines a fire lane of the same width will be plowed parallel to the line and another ten feet distant from the first will be plowed and the area between burned.

Tree tops left from recent logging operations will be worked into fire wood for home use, and undesirable growth will be cut and used for fuel, fence posts and farm, barn, and bridge material. Sap wood timbers to be used in fences and bridges will be creosoted in the landowner's creosote vat to give ten to twenty years useful life to the timber.

A good pine seed crop is expected this fall. Natural reforestation resulting from the seed, plus planting of open areas that cannot be reached by windblown seed, is expected to give a complete forest cover to the area within a few years. Forest cover is one of the best means of soil erosion control, being especially valuable on land too steep for cultivation. For this reason, forests are encouraged by the Soil Conservation Service for many locations.

HOW THE FARM FOREST HELPS

Right off hand can you think of eight good reasons for having a part of your farm in well managed and properly protected forest? We list below eight good reasons all tried and proven, and worth remembering.

The farm forest:

1. Holds soil in place and helps reclaim and utilize eroded or unused land.
2. Gives you a home grown supply of fuel, fence posts and timbers.
3. Provides employment in the "off" season.
4. May produce cash income.
5. Will increase farm values.
6. Will round out a complete farm management program.
7. Encourages wild life, especially the birds so valuable for insect control.
8. Makes better hunting.

CAUSES AND PREVENTION OF GULLIES

Terrace breaks, unprotected terrace outlets, cultivation of steep slopes and running rows with the slope are common causes of gullying which have been discussed in past issues. Now we add two more.

Farm roads and trails. Here in East Texas, when almost every farm has its "hills and hollows" it is difficult to keep farm roads, lanes or trails from running up and down slope somewhere. This is especially true if we try to take the shortest route to the back fields. The fact remains, however, that these farm roads are one of our worst sources of gullies. Loaded wagons cut ruts down the slope and plows dragged to the field cut just enough of a furrow to allow concentration of water and start a rivulet and before you know it a gully is formed. We all know plenty of places where a farm roadway has to be moved over every year or so because the ruts wash too deep for passage of tools.

Livestock in passing to and from the barn lots frequently make trails that soon deepen into washes and then gullies that destroy valuable grazing land and cut fields into patches. Anything that breaks through the protective covering of the ground and allows water to concentrate and start running is a starter of gullies.

Prevention of such causes of gullying is often not easy, as before mentioned. It is often possible, however, to follow a nearly level route in going to and from the field, by going across the slope instead of up and down it. It may take more time, but if a few minutes a day extra will prevent a gully, it's worth it.

Stock trails in the pasture may be taken care of by contour furrowing and sprigging the furrows with Bermuda grass. Simply take your shovel and fill or block the ends of the furrows on each side of the trail, and not enough water will get in it to start any serious wash.

Rodent damage. It is no exaggeration to say that thousands of gullies in East Texas have been started by pocket gophers or "salamanders." As one of our cooperators told us, during one rain, water following a gopher run cut a gully deep enough to "bury a horse" on his farm. Many a terrace or contour furrow break has also been directly due to these pests. During a heavy rain, when the soil is saturated, the water finds a ready-made channel in the gopher tunnel, the tunnel enlarges as the soil is carried out, the roof caves in and another gully is born.

Getting rid of "salamanders" is not difficult, especially if the whole community cooperates. The runs are easily located, and poisoned bait recommended by the U. S. Biological Survey, and which is highly effective, can be gotten at a cost of only two or three cents or less per acre. Trapping the few that escape the poison is a little more tedious, but time and effort taken in exterminating these pests is worth many dollars an hour in crops saved and land damage prevented.

SOIL TERMINOLOGY

Soil is the loose, disintegrated and partially decomposed layer of the earth's crust made up of sands, clays, rocks, and vegetable matter furnishing a medium for plant growth and support.

Soil profile is a vertical section of the soil from the surface into the underlying parent material.

Horizon - Soil horizon is a layer or portion of the soil profile, more or less well defined, and occupying a position approximately parallel to the soil surface.

Horizon A - The upper layer of the soil mass from which material has been removed by percolating waters, -- the surface soil.

Horizon B - The horizon of deposition, to which materials have been added by percolating waters, -- the subsoil.

Horizon C - The horizon of relatively unweathered material underlying the subsoil, or B horizon.

Soil Type - A soil which throughout the full extent of its occurrence has relatively uniform texture of the surface soil and relatively uniform profile characteristics, -- the unit of soil mapping.

Soil Series - A group of soils having the same character of profile (the same general range in color, structure, consistence, and sequence of horizons) - the same general conditions of relief and drainage and usually a common or similar origin and mode of formation. A group of soil types closely similar in all respects except the texture of the surface soils. The series derives its name from the town or stream near which it was first mapped.

Soil Texture - Texture is a term indicating the coarseness or fineness of the soil.

Soil Structure - Structure is a term expressing the arrangement of the individual grains and aggregates that make up the soil mass.

SUMMER STRIP CROPPING

With the unusual amount of June rain which we have had, were it possible to get peas and sorghum planted before July 1, we would have reasonable assurance of getting a stand. This new crop would not only give us summer and fall protection, but should make feed.

However, most of the farmers are behind with their cotton crop due to continuous rain and will have little time to prepare land properly and plant peas and sorghum before July 1. To afford protection for terraces, the peas and sorghum will need to be planted broadcast or close drilled, and we believe that after July 1 the odds will be against us for getting a stand and any reasonable amount of growth before time to prepare land for fall planting of oats. Hence, if we cannot get our land prepared properly and seed planted on time, it will be best to leave the oat stubble for protection; in many cases there will be a good growth of weeds and grass in the oat stubble to help out.

If you can, get your terraces or other strips plowed up with a turning plow and be ready to plant in the next few days. However, if you are not able to get the land prepared right and planted on time, let's leave the stubble and plan to get our fall oats planted as early as possible. Do not plow oat strips where lespedeza was planted. From this date on is the time when it will be proven whether this is a profitable crop or not.

SAVING SEED

The Soil Conservation Service has furnished seed for strip cropping this year in order to give farmers a start. Are you making plans for saving seed to plant next year's strip crops? Keep this in mind so that when planting time comes for another year you won't be caught without sufficient planting seed.

THE PASTURE MAN SAYS:

Let's improve the appearance and value of our farms in the Duck Creek watershed area by controlling weeds and brush on our pastures. Weeds and sprouts shade out more desirable grasses and clovers and take the plant food that should be available for the use of those grasses and clovers that afford feed for livestock. So many weeds are present because a thick turf of desirable grasses has never become established, grazing is started too early in the spring, the pasture is overgrazed, and the weeds have not been systematically cut each year. On a well managed pasture no weeds should be allowed to re-seed. Remember that the land covered by weeds is waste land, as far as profitable utilization is concerned, and no farmer can afford to have waste land on his farm.

A VALUED COMMENT

When a pioneer in the study of soil erosion expresses an opinion on erosion control methods, it is worthy of more than passing consideration. Mr. R. E. Dickson, Superintendent of the Texas Agricultural Experiment Station at Spur, Texas, is one of those pioneers whose studies have given us much of the information on runoff and soil losses that we use as basic information today.

Mr. Dickson states:

"The development of your project at Lindale struck me as being the most sensible piece of work on a large scale that I have ever seen. I did not see anything that you had done that was not easily within the reach of farmers of other sections that would visit your area with a view of applying what they saw to their own conditions. To me these are the requisites of a practical demonstration."

COOPERATION

Following is an appreciated letter from one of our cooperators, Mr. Chas. W. Copeland, who with his father, Mr. R. W. Copeland, is working hard to make a real soil conservation demonstration. With such combination of straight thinking as this letter shows and hard work as Mr. Copeland is doing, we know that soil conservation work will go forward.

"I first want to express my appreciation to all permanent members of the Soil Conservation Service for their untiring efforts in working with me and showing me how to save and make a better farm of the one I now have. They have been courteous and likable in all of our dealings together and have never to my knowledge been mad when we disagreed on any point. I have been stubborn on some points but after discussing them freely have come around to their point of view.

"Those of the boys on the temporary staff that I have met have been courteous and always ready to accommodate me in any way possible. I have enjoyed working in cooperation with every one and am looking forward to the time when we shall have farms in East Texas that we won't have to abandon for lack of soil.

"In my opinion President Roosevelt has undertaken the only course to bring prosperity back to these United States when we start working on the soil.

"If we only look back in history, we will see that our ancestors started this great nation from a fertile soil and it has continually increased in wealth and power so long as there was more fertile land to be had for the taking. Now that some few million acres have been abandoned and we can't move on, we must take care of what we have.

"In conclusion, I wish to say that we are well on our way back to prosperity if we will only make these demonstration projects show all who are interested what can be done to hold our land. Just bear this in mind that we must keep our soil no matter what price we have to pay.

"Yours for better farms through cooperation."

Signed: Chas. W. Copeland.

EROSION "BITES" AT BOTH ENDS

1. Erosion strips off the productive topsoil from the farm.

2. Gullies cut the farm into patches, making it hard and expensive to work.

3. Crop yields drop and the farmer's income is lowered as the soil is washed away.

4. With lowered income the farmer buys fewer groceries, dry goods, radios, automobiles and other necessities and luxuries for himself and family.

5. Local merchants suffer as result of lowered buying power of the farmer, and buy less from wholesaler or manufacturer.

6. Manufacturers slow down production and reduce wages or force of workers when sale of their products falls off.

7. On reduced salaries or wage or out of work altogether, people in manufacturing districts buy less products of the farm.

8. With less demand for farm products, prices drop and farming everywhere suffers a setback.

We may not have stopped to think about it that way, but every man, woman and child suffers to a greater or lesser extent as erosion takes its toll. The farmer who lets his land wash away gets "bitten at both ends," - by lowered crop yields and lowered prices for what he does produce.

ABOUT THOSE CONTOUR FURROWS

Contour furrows in pastures are sodding over fast where enough Bermuda was planted in them, and if you have watched your livestock grazing you know how much value has been added to your pasture. There have been few breaks, considering the extremely washing rains and the thin soil from which many of the furrows were turned, but these breaks must be repaired if best results are to be had from your work.

In repairing a break plenty of Bermuda grass sod should be placed in the break and covered with a shovel. As soon as the grass establishes itself the repaired place will be just as strong as the rest of the contour furrow. Once the furrow gets set in Bermuda grass your troubles are over, for danger of breaks is past.

All contour furrows should be checked, the breaks repaired, and Bermuda grass set wherever it does not exist at present for the furrows can not be expected to fulfill the purposes for which they are intended until they have become covered with Bermuda.

No agreement has been fulfilled until all contour furrows in the pasture have been set to Bermuda grass. It is the responsibility of the cooperator to see that this work is done on his farm.

RAINFALL IN DUCK CREEK WATERSHED

Location of Station

Date	Copeland, S. S.	Flewellen, C. W.	Elliott, B. A.	County Farm	Yarbrough, W. E.	Hall, M. F.	Hazel, T. R.	Lindale	Duration of rain in minutes
	Rainfall in inches								
Total for April	4.57	4.75	5.63	4.99	5.26	4.87	4.52	4.74	
May 1-15	6.32	5.77	5.35	5.99	6.02	5.85	6.48	6.60	
May 17	0.05	0.03	0.05	0.05	0.05	0.05	0.03	0.03	40
May 18	0.91	0.94	0.82	0.82	0.95	0.72	0.87	0.67	70
May 19	1.32	1.28	1.21	1.38	1.08	1.14	1.42	1.02	240
May 29	0.57	0.74	0.32	0.75	0.40	0.50	0.42	0.29	55
Total May 16-31	2.85	2.99	2.40	3.00	2.48	2.41	2.74	2.01	
June 3	0.10	0.04	0.04	--	--	0.12	--	0.08	30
June 8	--	--	--	--	0.10	--	--	--	
June 11	0.70	0.25	0.93	0.24	0.23	0.46	1.03	0.53	40
June 13	0.16	0.74	0.88	0.71	0.77	1.05	0.18	0.64	15
June 15	0.94	0.86	0.64	0.96	0.94	0.34	0.69	0.87	420
Total June 1-15	1.90	1.89	2.49	1.91	2.04	1.97	1.90	2.12	

Attention is called to the rains of June 13 and 15th. On the thirteenth gages in different parts of the watershed registered from .23 to 1.03 inches of rainfall, enough to get the ground moistened to fairly saturated. On the fifteenth one gage showed 1.05 inches falling in 15 minutes, or at the rate of over four inches per hour. It is during rains of such high intensity, falling on already wet soil, that we have very high runoff and soil losses.

CAMP ACTIVITIES FOR THE MONTH OF MAY 1935.

The work in the Duck Creek area is rapidly drawing to a close. The work done during the month of May was principally small jobs which required more man hours per unit of structure than ordinarily. The following work was accomplished:

1. 3 miles of truck trails built.
2. 52 acres of gullies treated with structures and vegetation.
3. 48,612 square yards of gully banks sloped.
4. 2317 check dams built.
5. 195,719 square yards of seeding and sodding in gullies.
6. 814 linear feet of diversion ditch cut.
7. 483 linear feet of terrace outlet channel cut.
8. 355 square yards of terrace outlet channel sodded solid with Bermuda sod.
9. 90 man days were spent on miscellaneous erosion control.
10. Several miles of surveys were run.

The average company strength for the month of May was 238. An average of 190 men were released to the camp superintendent each day for field duty. Twenty calendar days were worked during the month. The actual man days worked amounted to 3753. Thirty-seven men were retained in camp for regular and emergency details. An average of 14 men were sick or otherwise absent each day in May.

Several promotions to leaders and assistant leaders have been made recently. These vacancies were made possible by the formation of a cadre in camp SCS-3. This cadre is composed of experienced men in all phases of camp and field duties to form a nucleus for a new camp.

J. H. Cheek
Camp Superintendent SCS-3
Lindale, Texas

VISITORS - MAY 21 TO JUNE 19.

46 farmers from Winnsboro.
22 farmers from Winnsboro.
116 farmers from Mt. Pleasant, Titus County, Texas.
178 farmers from Shelby County, Texas.
V. F. Fitzhugh, teacher of Vocational Agriculture, Tyler, and 32 students.
17 farmers from Hopkins County, Texas.
E. D. Bolton, teacher of Vocational Agriculture, and 37 Smith County farmers.
37 farmers from Van Zandt County.
131 farmers from Madison County.
Jno. P. Culpepper, Sec'y. Chamber of Commerce, Dublin, and 27 farmers and agricultural students.
W. O. Cox, Chamber of Commerce, Tyler, and 30 farmers.
J. M. Hancock, teacher of Vocational Agriculture, Whitehouse, and 11 farmers.
J. C. McAdams and 23 colored Vocational Agriculture teachers from district 5.
72 Titus County farmers.
11 Smith County farmers.
135 farmers from Coryell County, Texas.
48 farmers from Cass County, Texas.
73 farmers from Wood County, Texas.
J. C. Shoultz and group of 21 farmers from Grapeland, Texas.
L. L. Hale, Vocational Agriculture teacher, and R. M. Hooker, County Agent, with group of 38 farmers from Rusk County.
Group of 20 farmers from Winnsboro and Sulphur Springs, Texas.
N. H. Lockey, Winnsboro, Texas, with 10 Franklin County farmers.
105 farmers from Nacogdoches County.
B. W. Claunch, Supervisor, County Works, Rusk County, Texas.
B. M. Rainwater, U. S. Biological Survey, Henderson, Texas.
Messrs. R. R. Herring, L. O. Strange, Don Herington, I. E. Miles, and J. E. Gates, Soil Conservation Service, Meridian, Mississippi.
W. C. Holley, Asst. Rural Supervisor, Rural Research, A & M College.
Dr. L. P. Gabbard, Experiment Station, A & M College.
17 farmers from Wood County, Texas
T. Taylor Brown and group of 9 from East Texas State Teachers College.
H. G. Towns, College Station, Texas.
L. F. Stewart, Experiment Station, College Station, Texas.
Chas. Foote, College Station, Texas.
R. F. Gwin, Experiment Station, College Station, Texas.
Ancil Hogan, College Station, Texas.
C. A. Richenthin, College Station, Texas.
Profs. C. N. Shephardson and A. L. Darnell, Dairy Husbandry Department, A & M College.
Messrs. Sam R. Brashears, Jack Hart, F. N. McCutcheon, J. W. Jackson, Thos. Yount, W. T. Hand, Chas. Sharpe, and W. H. Hutcheon, Weatherford, Tex
H. I. Brendle, Vocational Agriculture teacher, Garrison, Texas.
Rufus Higgs, Publisher, Stephenville, Texas.
H. M. Haswell, County Agent, A. W. Midgelley, Sec'y Chamber of Commerce, F. J. Burton, teacher of Vocational Agriculture, Groveton, Trinity County, Te
N. C. Larkin, Huntsville, Texas.
Dr. Kinchiloe, Sociology Dept., University of Chicago.
Messrs. E. C. Lasater, W. O. Cox, Henry Marsh, W. L. Pounders, W. B. Henson, V. F. Fitzhugh and Miss Marsh of Tyler, Texas.

VISITORS CONT'D.

Mr. & Mrs. Loggans, Shelby County, Texas.
R. E. Dickson, Supt. Experiment Station, and son R. E. Jr., Spur, Texas.
Dr. J. J. Taubenhaus and Mr. Boyette, College Station, Texas.
Messrs. W. T. Shaw, S. T. Wright Sr., S. T. Wright Jr., H. T. Shaw and L. R. Shaw of Ennis, Texas.
C. T. Sims, teacher of Vocational Agriculture, Winnsboro, and Messrs. A. S. Kennamer, H. Kimbrough, H. H, Grainger, farmers.
Jack Pope and James B. Davis, Mt. Pleasant, Texas.
Messrs. J. H. Ryan, M. E. Dorsey, A. H. Luker, J. C. Shoultz, Grapeland, Texas.
Mr. Wycatt, Mineola, Texas.
Earl Smith, Asst. Regional Director, Soil Conservation Service, Muskogee, Okla.
L. L. Hale, teacher Vocational Agriculture, Henderson, Texas, and E. Webb.
Mrs. Fred G. Prewitt, Gatesville, Texas.
Miss Ranson, writer for Dallas Journal, Dallas, Texas.
Messrs. C. P. Oneal, W. E. Burge, E. W. Barber, Starville, Texas.
H. L. Mathews, Vocational Agriculture teacher, Jim Houston, ginner, J. B. Parker, Mayor, J. P. Groet, Supt, of Public Schools, and E. O. Lively, Merchant, of Elkhart, Texas.
J. M. Starr, Rotan, Texas.
Ethel S. Livingstone, Cisco, Texas.
Mrs. J. Frank Moore, 25 W. 55, New York City.
J. R. Patterson, 634 W. Ferguson, Tyler, Texas.
Lee Simmons, Mgr. State Prison System, Huntsville, Texas with Mrs. Simmons.
Clarence DeBusk, Jacksonville, Texas.
Messrs. L. Knowles, J. M. Price, Byron Bing, and Geo. Russell of Oakwood, Leon County, Texas.